

Tek Pit Excavation – 12/8/02

Area and volume calculations and spatial orientations were accomplished using Acad drawing Dar-27.dwg of 1996, and as updated (in the existing pit area) by GPS survey of 12/3/02. As of 12/3/02, the existing pit floor now extends 200 feet further north with an average GPS measured elevation of about 2509 feet. Three mining units are addressed in this plan. Two of these units (Unit 1 and Unit 2) are assumed to be authorized for extraction under the existing 1992 Environmental Assessment. The third unit (Unit 3) is a new proposal and constitutes the mining to be evaluated and analyzed under any new NEPA documents. The following excavation – restoration plan is provided assuming the units will be mined consecutively as numbered within the 10-year time frame as considered for the Gravel Acquisition Plan (GAP) and with a start year assumed to be the field season of 2003.

Unit 1 “Wedge” (see map for location)

Unit 1 is a cleared and partially excavated ramp (irregular slope at approximates 1 ½ :1) that is assumed to be currently authorized for excavation under the 1992 Environmental assessment. Unit 1 involves a surface area of approximately 21,860 square feet (0.50 acres). This area is in an irregular crescent shape, approximately 200 feet long, by 124 feet wide. The elevation at the top of the unit averages around 2535 feet while the floor elevation is around 2509 feet, giving a backwall thickness of 26 feet. The resultant wedge shape would yield around **10,500 bank cubic yards**.

Excavation would continue in a combination terrace-cut, cat push method using an ascending ramp on the west side of the pit floor to gain access to the upper reaches of Unit 1. Cuts would be in some configuration of expanding crescent shapes moving further east. Excavation would continue in this fashion moving the new cuts into the area of Unit 2, while processing, stockpiling and other operations would continue on the old existing pit floor. Oversize or other material reject should be placed as soon as possible along the south easterly corner and easterly backwall to “fill” the old cut for rehabilitation purposes.

Unit 2 “Cleared” (see map for location)

Unit 2 is an irregular polygon of cleared ground to the east of unit 1, with rough dimensions of 258 feet long by 192 feet wide. The existing cleared surface area involves some 41,075 square feet (0.94 acres). The extraction area, leaving a borderline buffer for topsoil storage and operational space, is roughly 193 feet long, by 145 feet wide, and involves some 27,182 square feet (0.62 acres), which is contained within the cleared 0.94 acres. Assuming a pit floor elevation at 2509 feet, an existing surface elevation averaging around 2530 feet, and an average thickness of 30 feet, unit 2 should yield about **30,200 bank cubic yards**.

Excavation would be continued as in unit 1, with terrace cuts and cat pushes to reach the pit floor for gravel processing and stockpiling. As excavation approaches the pit limits on the north and east walls, care should be taken to allow for appropriate access to the upper reaches for rehab purposes.

Unit 3 “GAP Proposal”

Unit 3 is an irregular rectangle of ground to the west of the existing pit, with rough dimensions of 621 feet long by 180 feet wide. The proposed area to be cleared involves some 97,375 square feet (2.24 acres). The extraction area, leaving a borderline buffer for topsoil storage and operational space, is roughly 598 feet long, by 131 feet wide, and involves some 76,742 square feet (1.76 acres), which is contained within the clearing limits (2.24 acres). Assuming a pit floor elevation at 2508 feet, an existing surface elevation averaging around 2537 feet, and an average thickness of 28 feet, unit 3 should yield about **79,500 bank cubic yards**.

Excavation would continue in terrace cuts and cat pushes in north-south segments, working both south and west. Reject and oversize material would be placed along the easterly backwall, building that backwall incrementally westerly. Additionally, waste material can be placed in the embayment of unit 2, filling in the existing excavation as much as possible. When Unit 3 is completely mined, the overall pit configuration should be similar to the existing pit of year 2002, but migrated approximately 150 feet further west.